1. (Twice Amended) A method for evaluating the morphogenic activity of a candidate morphogenic protein or analog thereof, the method comprising the steps of:

(a) creating, for purposes of the evaluation, a local defect site in a mammal accessible to progenitor cells,

(b) administering said candidate morphogenic protein or analog systemically to said mammal at a site distal from the local permissive defect site,

(c) measuring the ability of the candidate protein or analog to induce new tissue formation at said defect site, and

(d) comparing the ability of said candidate with the ability of a control to perform the same function.

B' Sub C'

3. (Twice Amended) A method for evaluating an optimal dosage of a candidate morphogenic protein or analog thereof, the method comprising the steps of:

(a) creating, for purposes of the evaluation, a local defect site in a mammal accessible to progenitor cells,

(b) administering said candidate morphogenic protein or analog systemically to said mammal at a site distal from the local permissive defect site,

(c) measuring the ability of the candidate protein or analog to induce new tissue formation at said defect site, and

(d) comparing the ability of said candidate with the ability of a control to perform the same function.

B² Sub C²

23. (Amended) The method of claim 1 or claim 3 wherein said morphogenic protein is a morphogenically active amino acid sequence variant of a morphogen selected from the group consisting of: OP1, OP2, OP3, BMP2, BMP3, BMP4, BMP5, BMP6, BMP9, BMP-10, BMP-11, BMP-12, BMP-15, BMP-3b, DPP, Vgl, Vgr, 60A protein, GDF-1,. GDF-3, GDF-5, GDF-6, GDF-7, GDF-8, GDF-9, GDF-10, and GDF-11.

B³ Sub C³